

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/235,387	GIROUX ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Phuongchau Ba Nguyen	2665	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6-24-5.
2. ☒ The allowed claim(s) is/are 1-5,10-12,14,6-9,25-31; Renumbered as 1-21 respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date <u>12-5-5</u>.</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____.</li> </ol> |
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### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Mitchell on 12-5-5.
3. The application has been amended as follows:

**Claim 1, line 28,**

The first occurrence of "a" had been deleted.

### **REASONS FOR ALLOWANCE**

4. The following is an examiner's statement of reasons for allowance:

Regarding claims 1-12, 14, the prior art fails to teach or suggest a method for transmitting non-real time and real time traffic in a connection oriented communication network where the traffic is carried between end users over virtual channel connections, and wherein groups of virtual channel

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connections can be aggregated into virtual path connections, comprising

“wherein at least two of the said virtual channel connections aggregated into said virtual path connection in the network core do not have a same class of transmission service, wherein flow control is applied to said virtual path connections in said network core between the aggregate points to thereby regulate the rate of transmission of the non-real time traffic along the virtual path connections, the flow control terminating at said aggregation points and said segregation points, where in the virtual path connections are provisioned with a guaranteed transmission bandwidth and dynamic bandwidth allocation such that when additional bandwidth becomes available said flow control permits said non-real time traffic to be transmitted on the virtual path connection at an increased rate, where traffic management, including the assignment of bandwidth in said virtual path connections, for said virtual channel connections is performed at said aggregation points, and wherein traffic management in said network core is performed only on said virtual path connections without differentiating among virtual channel connections carried on the same virtual path connection even if said virtual channel connections

carried on the same virtual path connection have different classes of transmission service," which is considered in combination with other limitations, as specified in the independent claim 1.

Regarding claim 25, the prior art fails to teach or suggest a communications network comprising a network core including a plurality of core nodes in communication over virtual path connection and an edge network including a plurality of edge nodes in communication with end users over virtual channel connections, wherein traffic entering the network core is aggregated from a plurality of virtual channel connections onto aggregate traffic streams comprising virtual path connections within the network core and wherein traffic exiting the network core is segregated from said aggregate traffic streams onto virtual channel connections outside the network core, "the real time traffic and the non real time traffic each being aggregated into respective real time aggregate traffic streams and non real time aggregate traffic stream comprising separate virtual path connections, each of the non real time aggregate traffic streams having one of the plurality of classes of transmission service, each of the non real time aggregate traffic streams is

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provisioned with dynamic bandwidth allocation and a guaranteed transmission bandwidth, the real time traffic in each real time path aggregate traffic stream being transmitted from a corresponding aggregation point to a corresponding segregation point according to a first class of path transmission service and the non real traffic on each non real time path aggregate traffic stream being transmitted from a corresponding aggregation point to a corresponding segregation point according to a second class of path transmission service, and wherein flow control is applied to each non real time path aggregate traffic stream between the aggregation point and the segregation corresponding to each non-real time traffic stream to thereby regulate the rate of transmission of the non real time aggregate traffic stream and permit the transmission rate to be increased as additional bandwidth become available, the flow control terminating at said aggregation point and at said segregation point corresponding to each non real time aggregate traffic stream, and wherein traffic management including assignment of bandwidth in said virtual path connections, for said virtual channel connections is performed at said aggregation points, and wherein traffic management in said network core is

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performed only on said virtual path connection without differentiating among virtual channel connections carried on the same virtual path connection even if said virtual channel connections carried on the same virtual path connection having different classes of service," which is considered in combination with other limitations, as specified in the independent claim 25.

Regarding claims 26-31, the prior art fails to teach or suggest a method of transmitting real time and non real time traffic across a connection oriented communication network, wherein the traffic is carried between end users over virtual channel connections can be aggregated into virtual path connections, comprising "establishing a maximum usable bandwidth and a minimum guaranteed bandwidth for said virtual path connections, which are provisioned with dynamic bandwidth allocation, and flow control for said virtual path connections wherein as additional bandwidth becomes available said flow control permits said non-real time traffic to be transmitted on said virtual path connections at an increased rate; aggregating all said non real time traffic flows into an aggregated traffic flow in said virtual path connections by distributing the minimum guaranteed bandwidth of said virtual path connection among said

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non real time traffic flow such that said each non real time traffic flow receives a share of said minimum guaranteed bandwidth; dividing any remaining bandwidth at said aggregation points following said distribution of the minimum guaranteed bandwidth on said virtual path connection among said non real time traffic flows according to a fairness policy; routing said aggregated traffic flow along said virtual path connections toward said segregation points, without differentiating among said non-real time traffic flows at any core node in the connection," which is considered in combination with other limitations, as specified in the independent claim 26.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchau Ba Nguyen whose

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telephone number is 571-272-3148. The examiner can normally be reached on Monday-Friday from 10:00 a.m. to 2:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**DUCHO**  
**PRIMARY EXAMINER**



12-7-05



Phuongchau Ba Nguyen  
Examiner  
Art Unit 2665